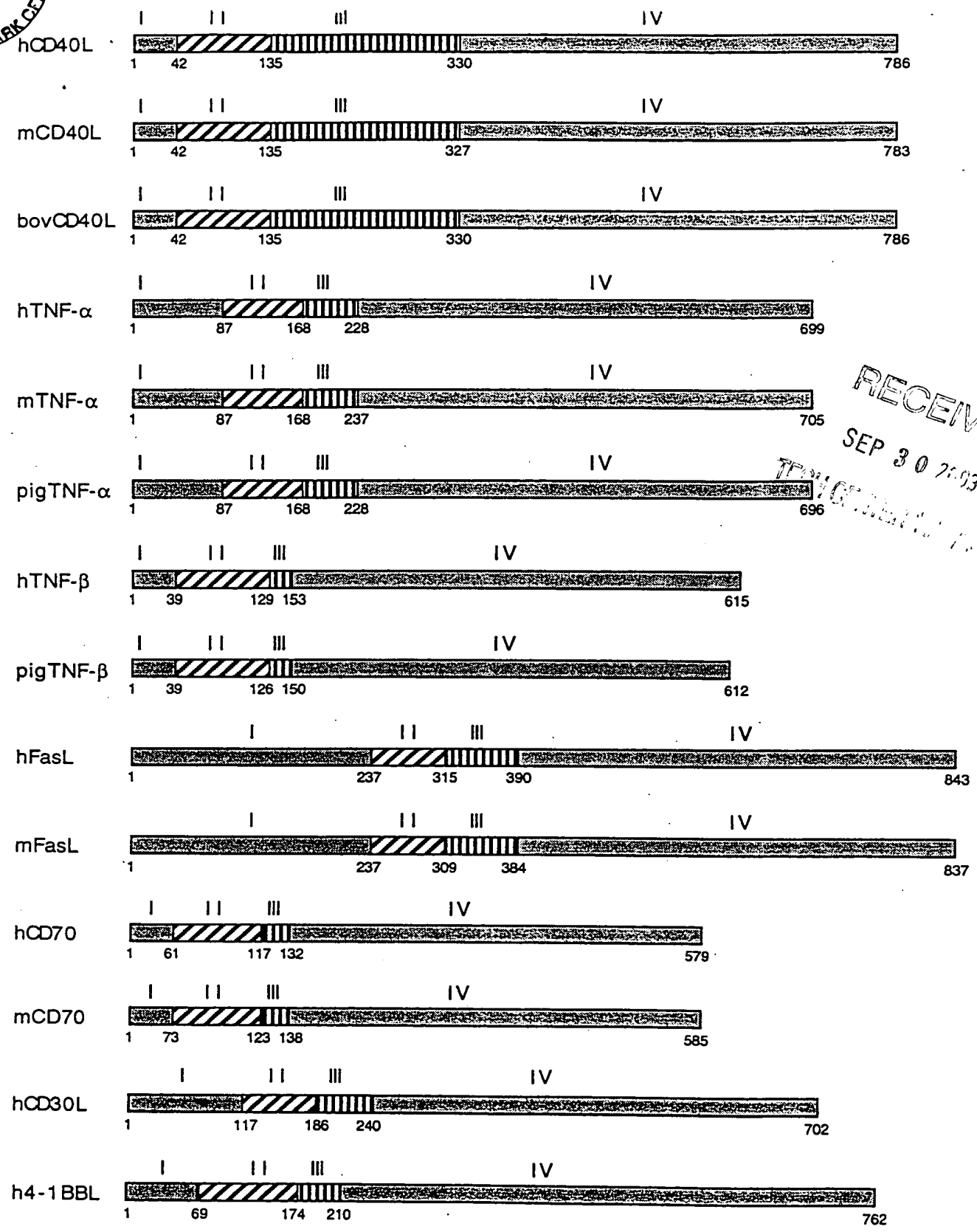




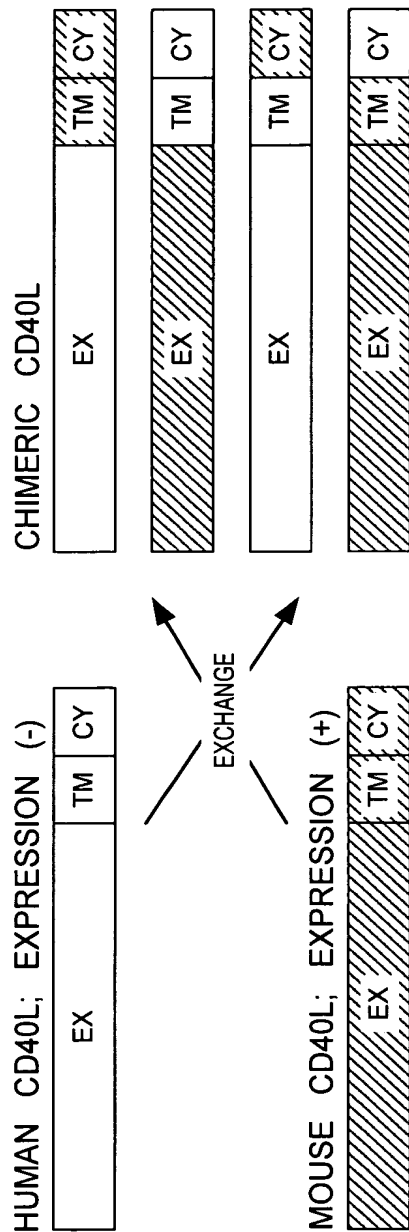
NOVEL EXPRESSION VECTORS CONTAINING ACCESSORY MOLECULE  
LIGAND GENES AND THEIR USE FOR IMMUNOMODULATION AND  
TREATMENT OF MALIGNANCIES AND AUTOIMMUNE DISEASES  
Inventor(s): Thomas Kipps, et al.; Serial No.: 08/982,272  
Filing Date: December 1, 1997; Atty. Docket No.: 041673-2069



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DOMAINS: I - Cytoplasmic Domain; II - Transmembrane Domain; III - Proximal Extracellular Domain; IV - Distal Extracellular Domain (putative soluble form)

Figure 1



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Figure 2



HeLa

CLL

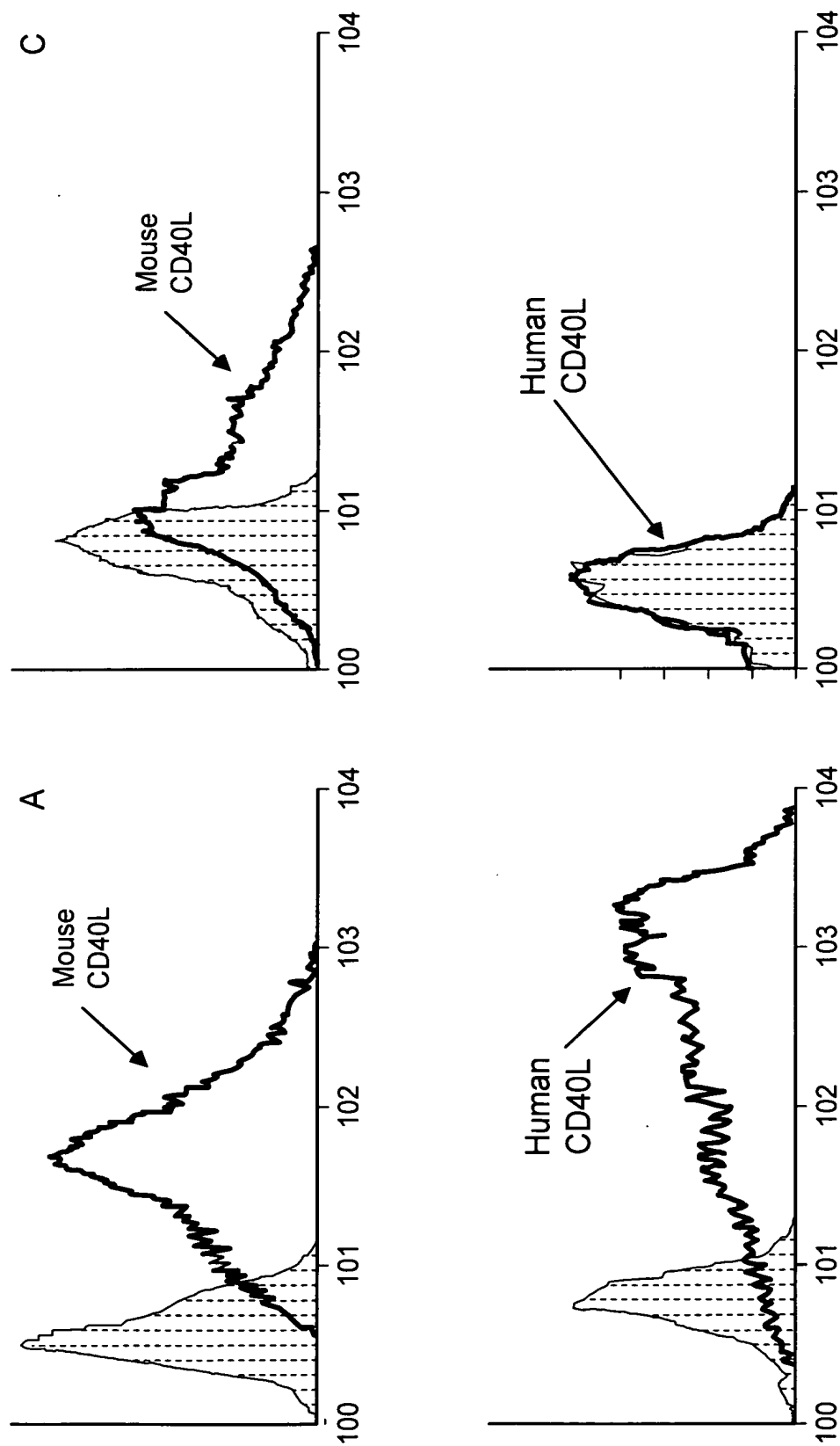


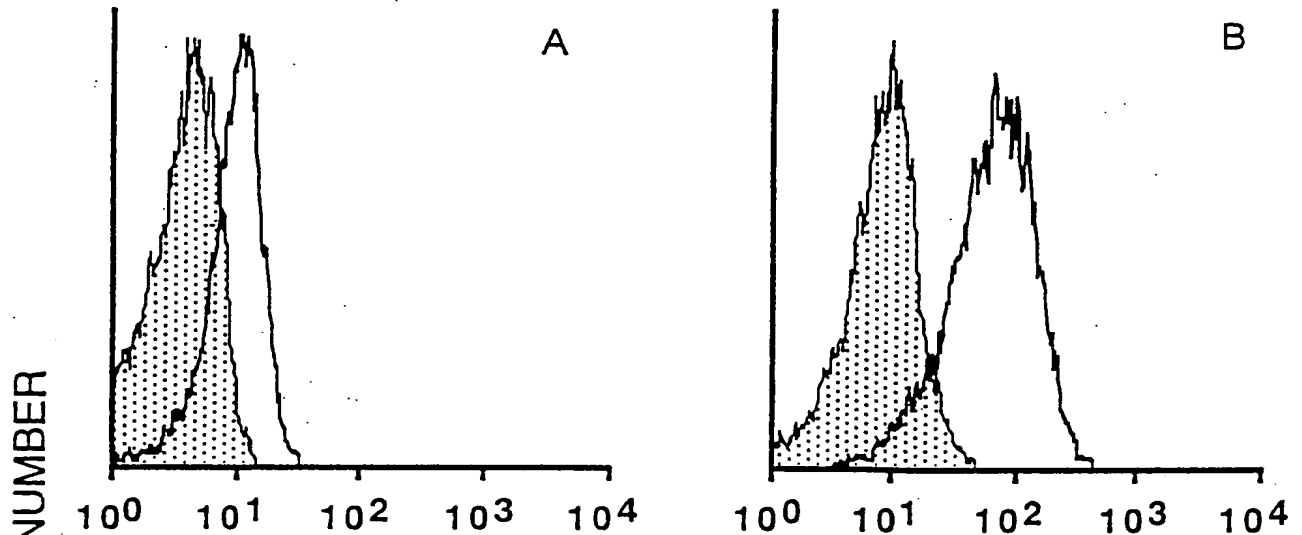
Figure 3



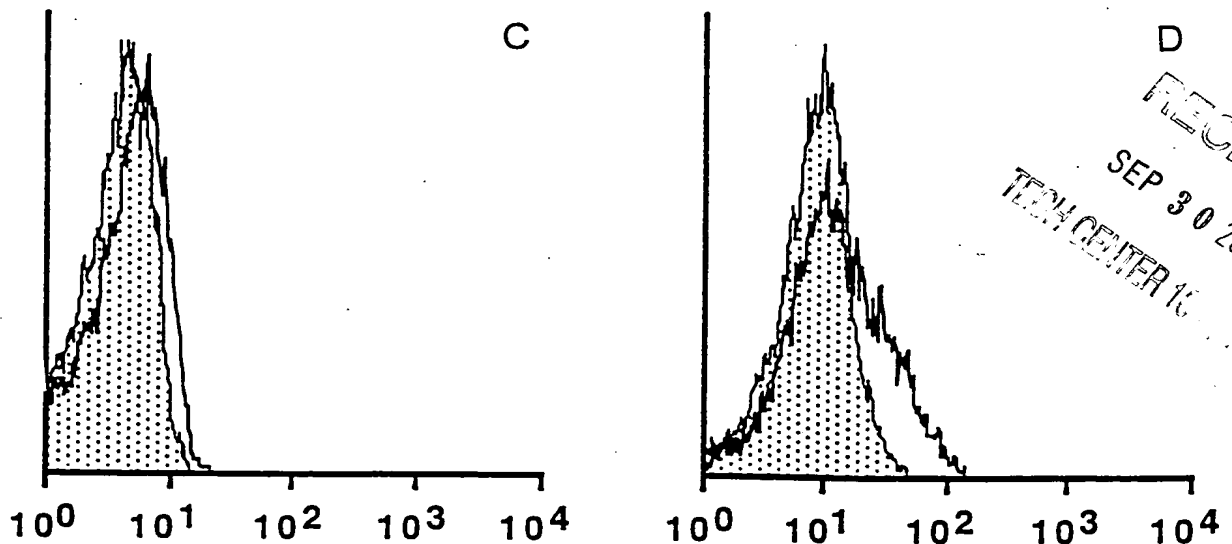
NONINFECTED

+mCD40-L ADENOVIRUS

CD54 EXPRESSION



CD80 EXPRESSION



RELATIVE FLUORESCENCE INTENSITY

Figure 4

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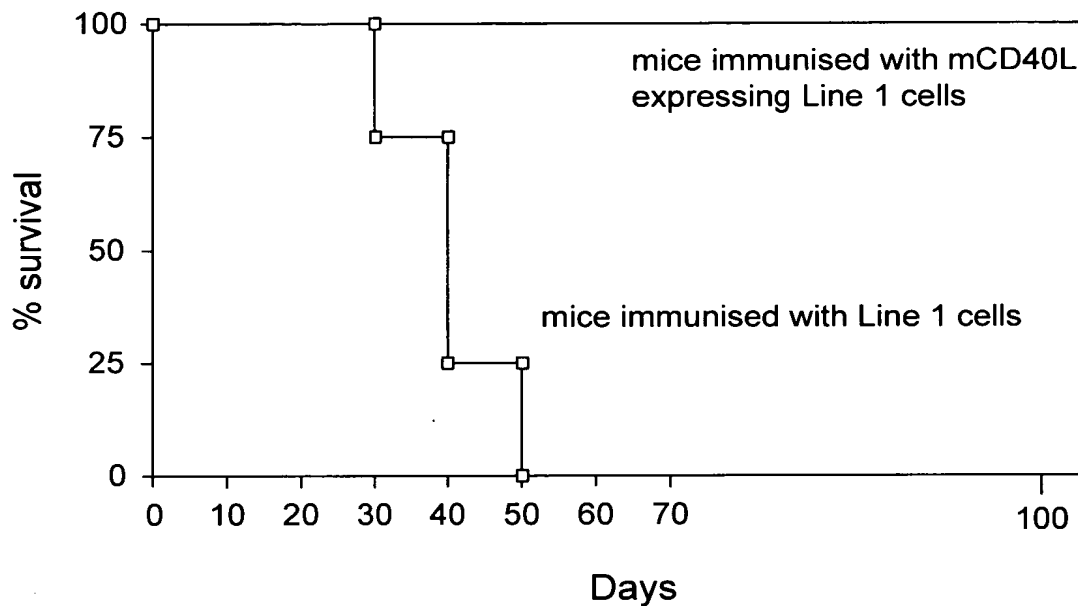


Figure 7

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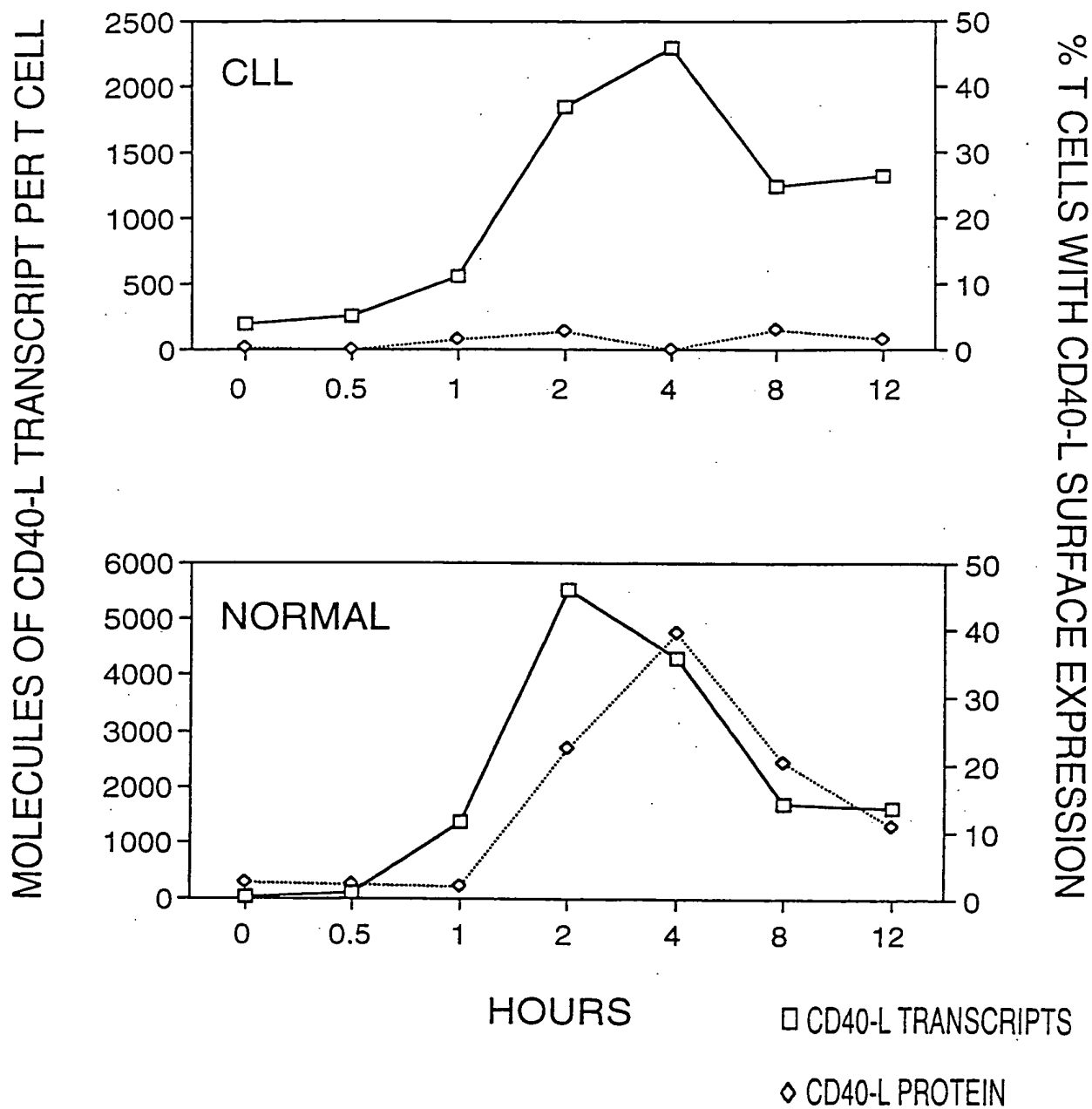
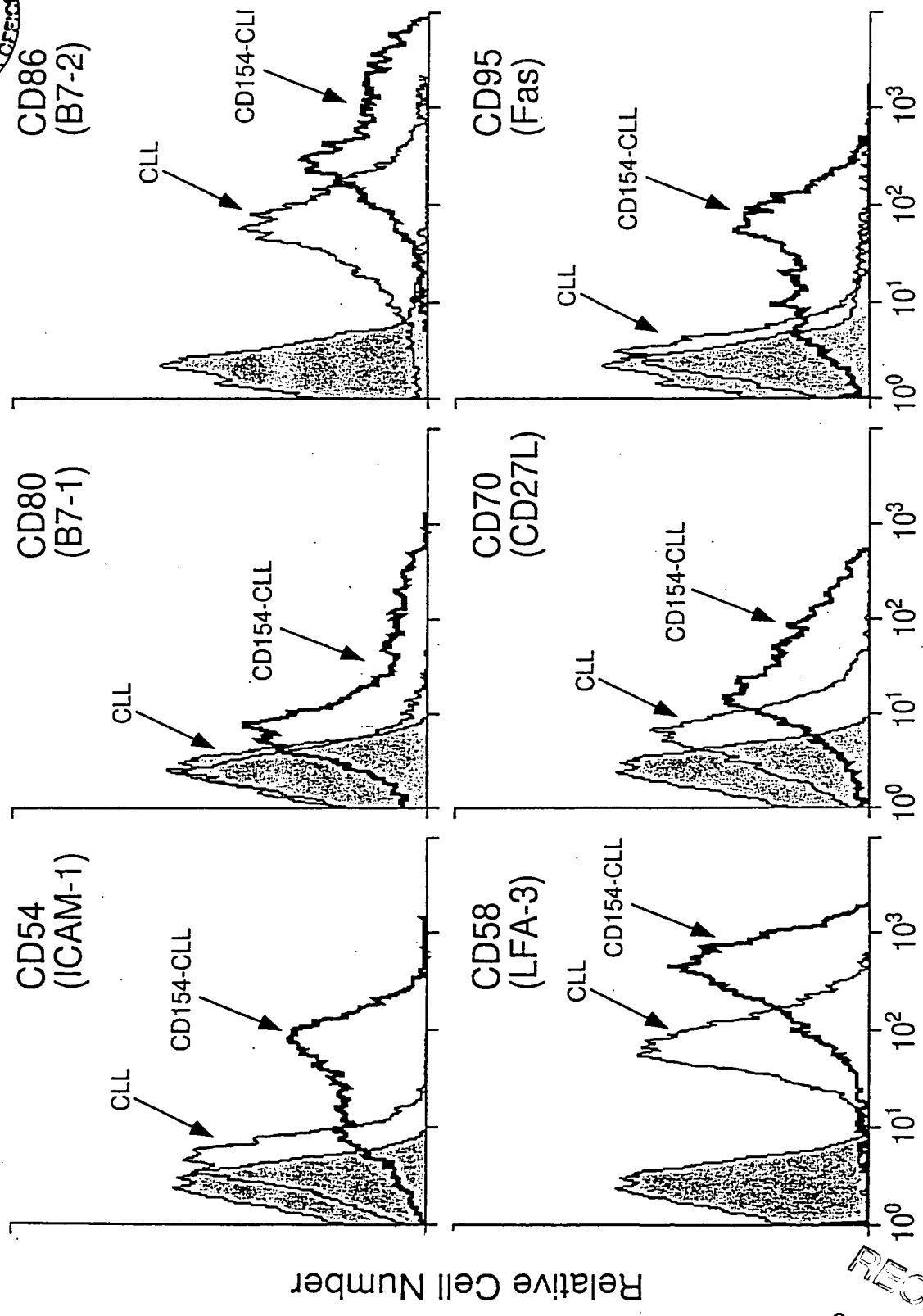


Figure 8

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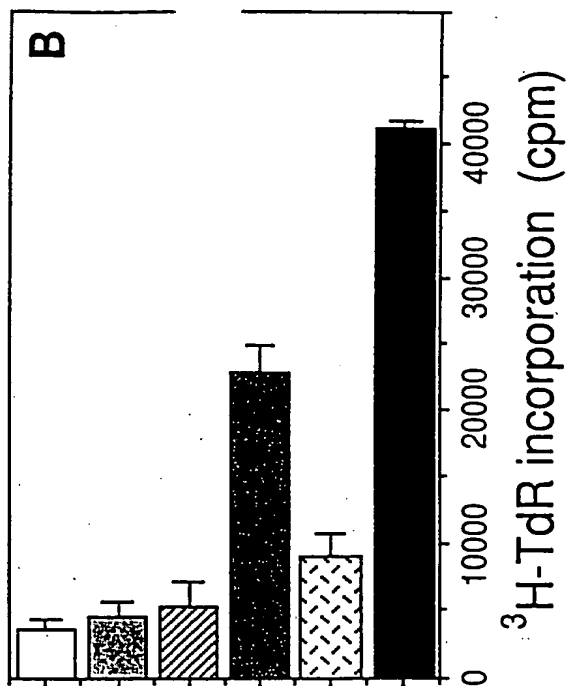
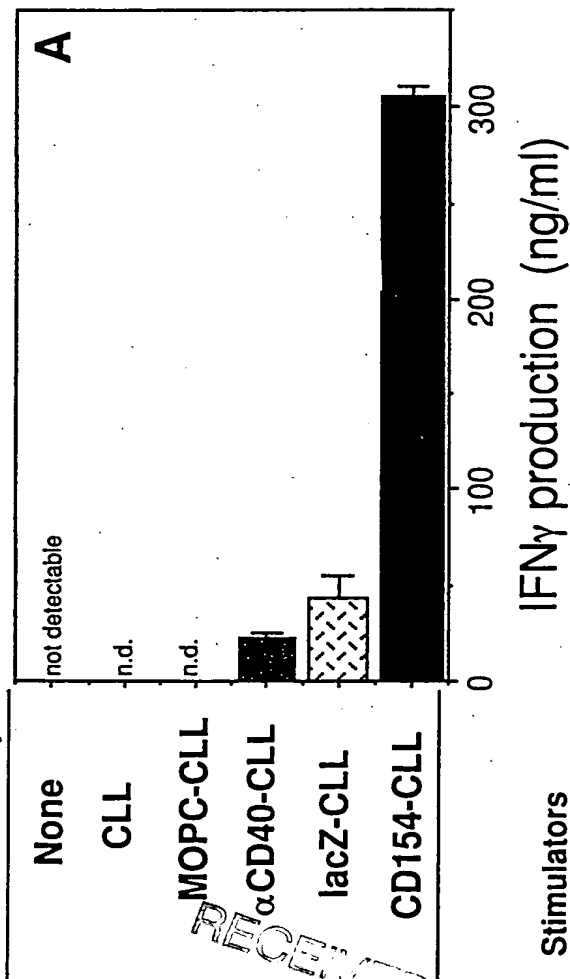
Green Fluorescence Intensity

Figure 10

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Allo-T cell  
stimulated by



Stimulators  
Primary Secondary

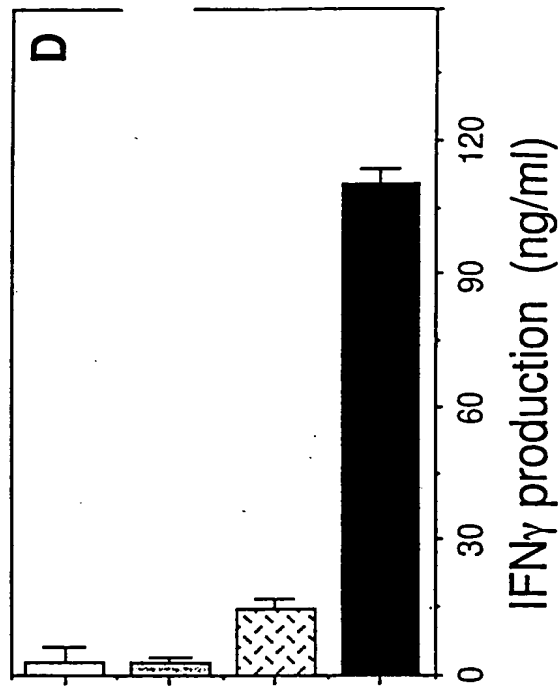
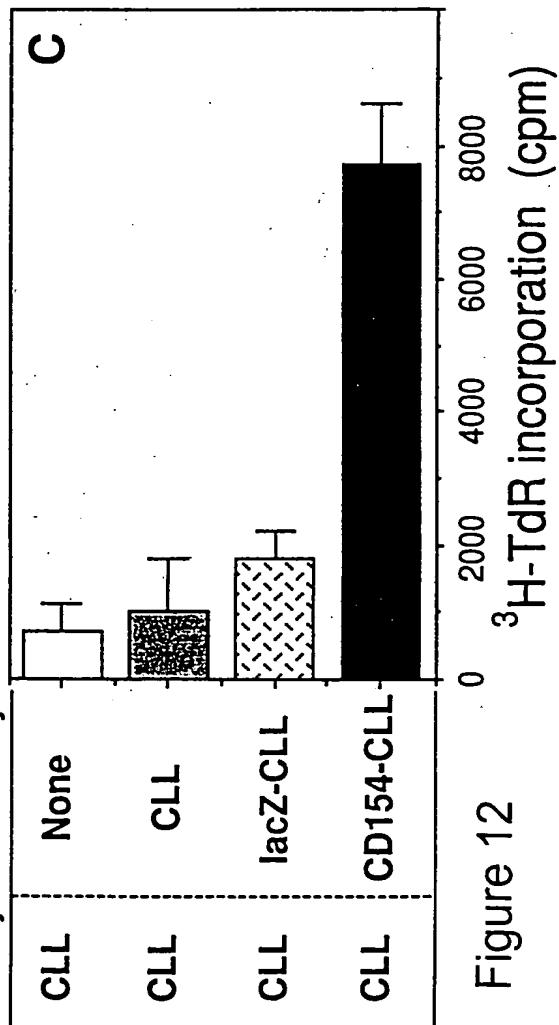


Figure 12



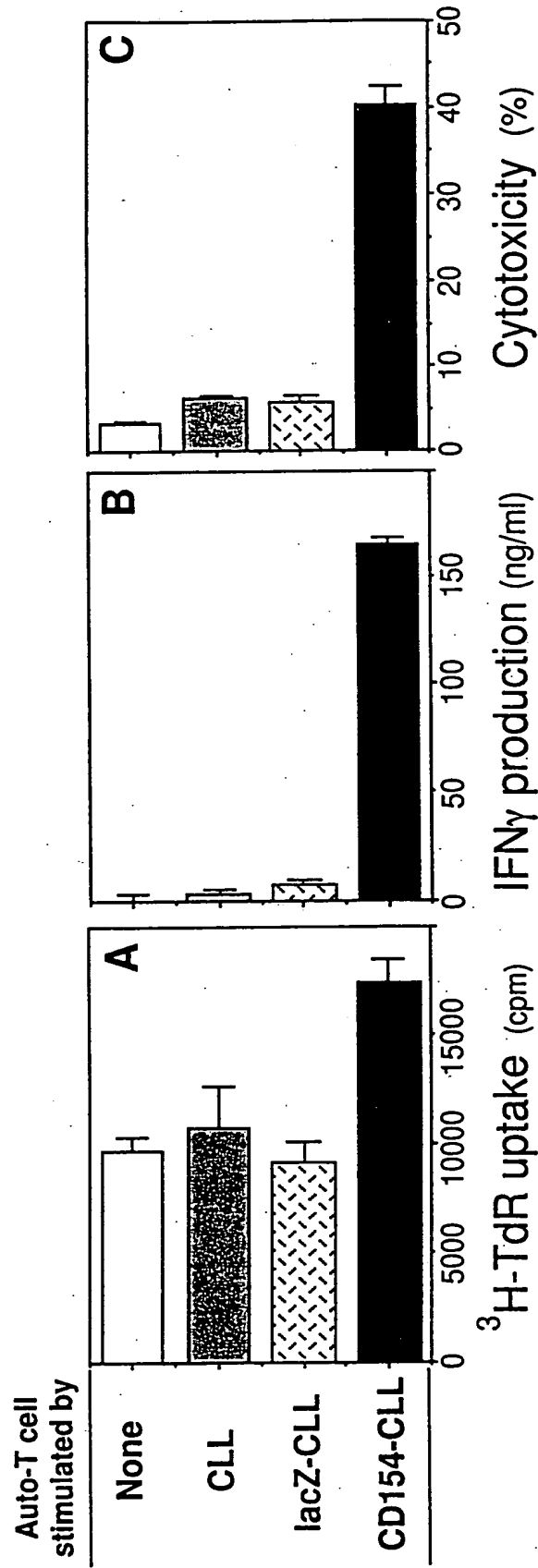


Figure 13

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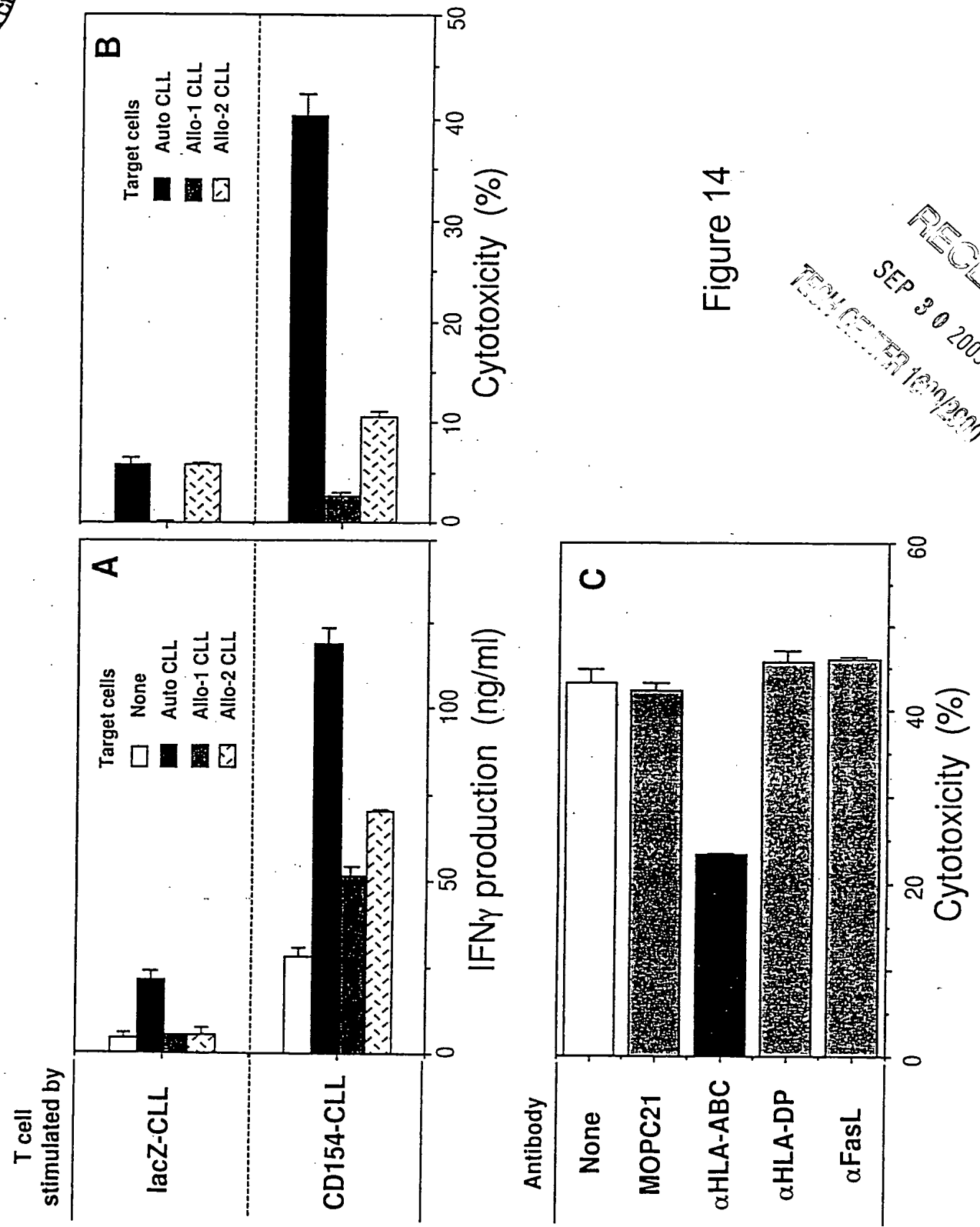
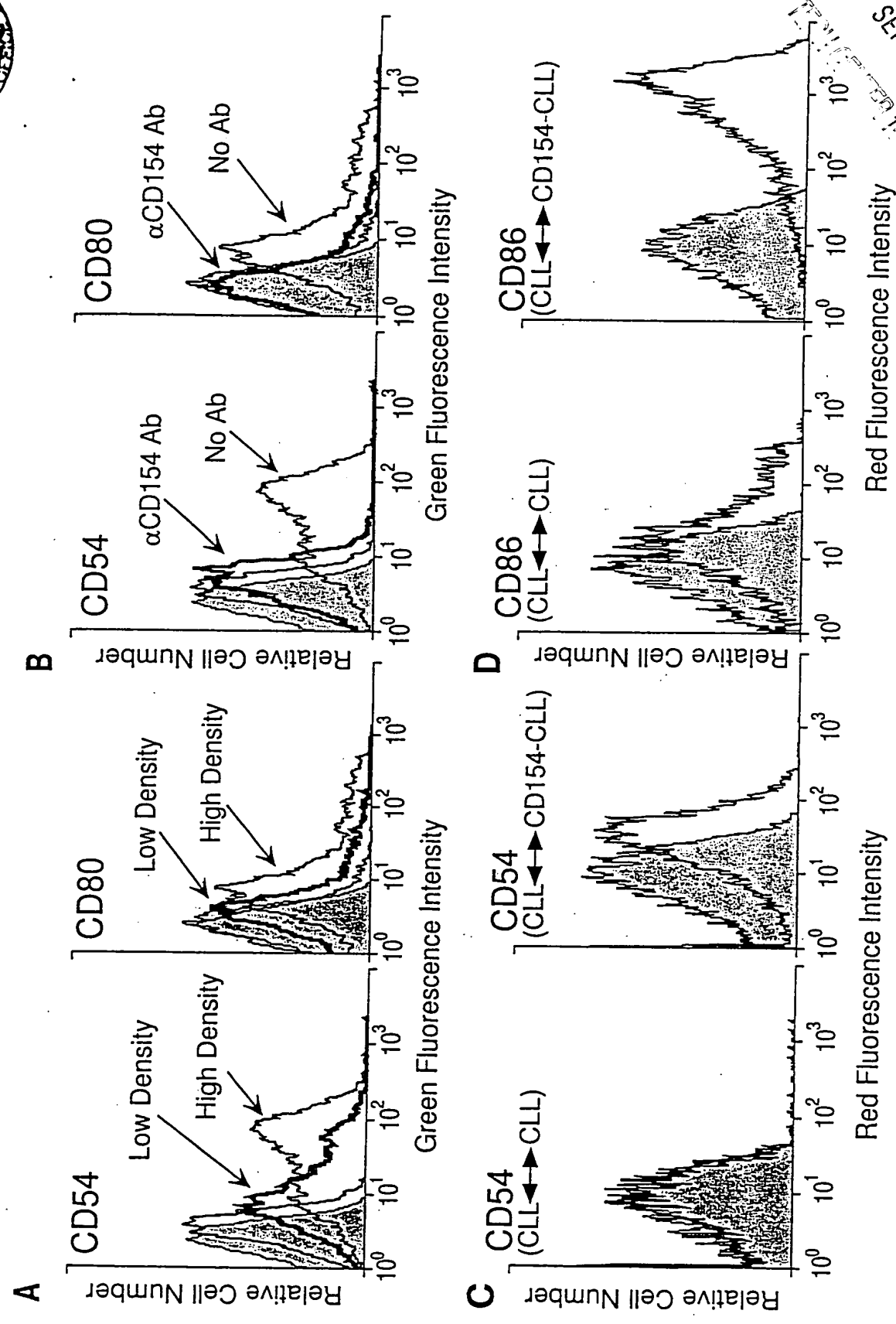


Figure 14

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Figure 15

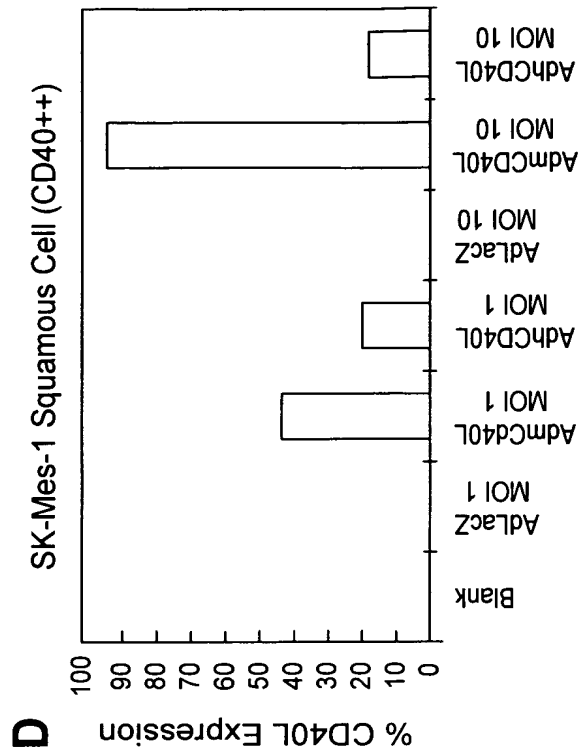
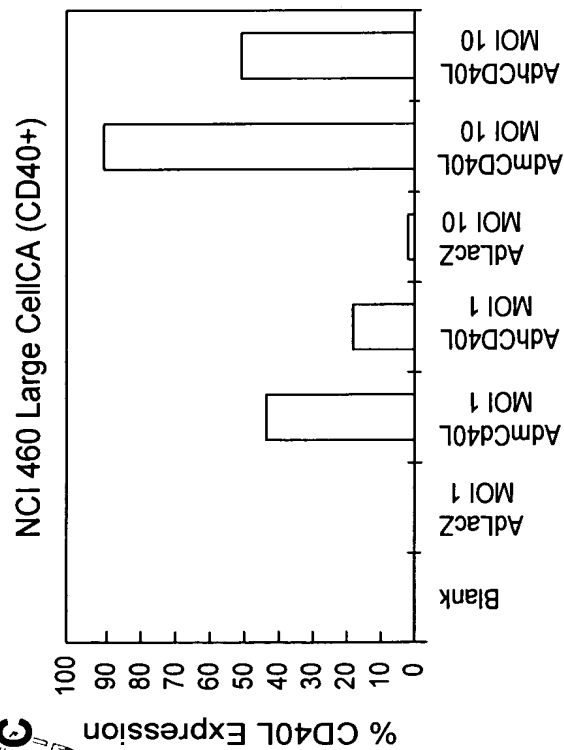
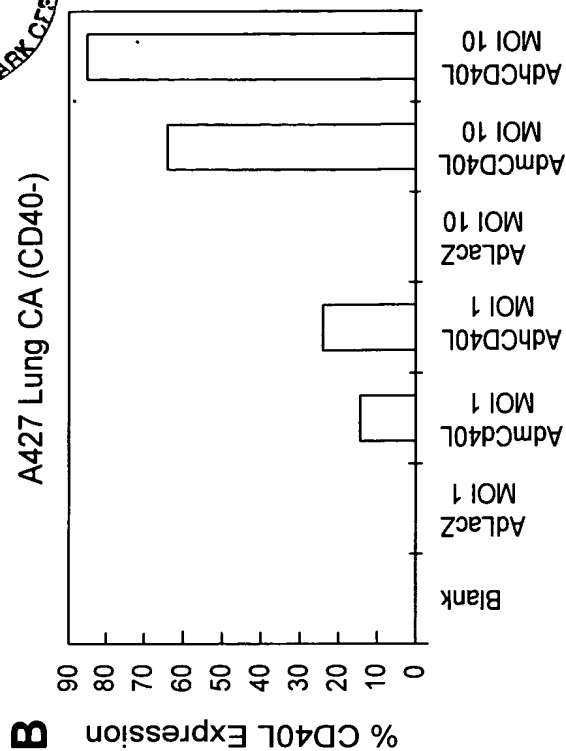
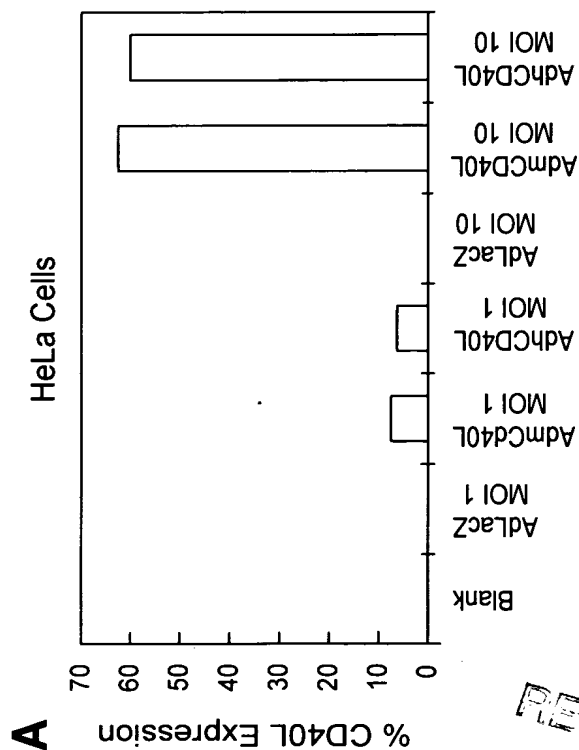


Figure 21

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Filing Date: December 1, 1997; Atty. Docket No.: 041673-2069

**A**

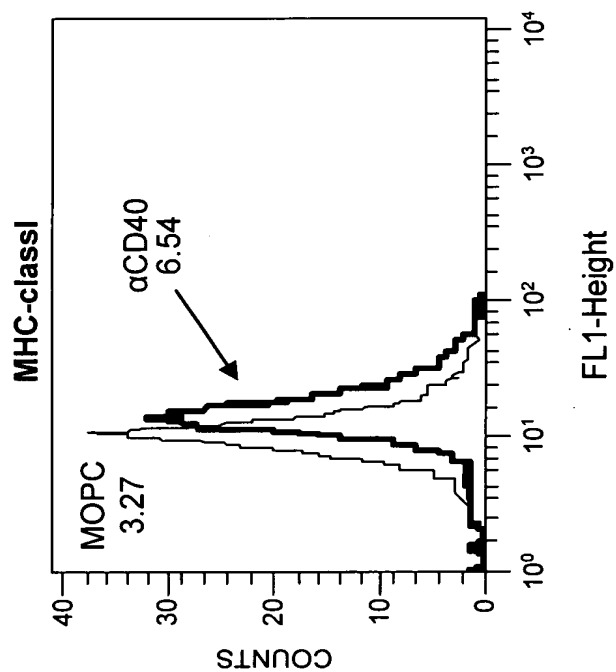
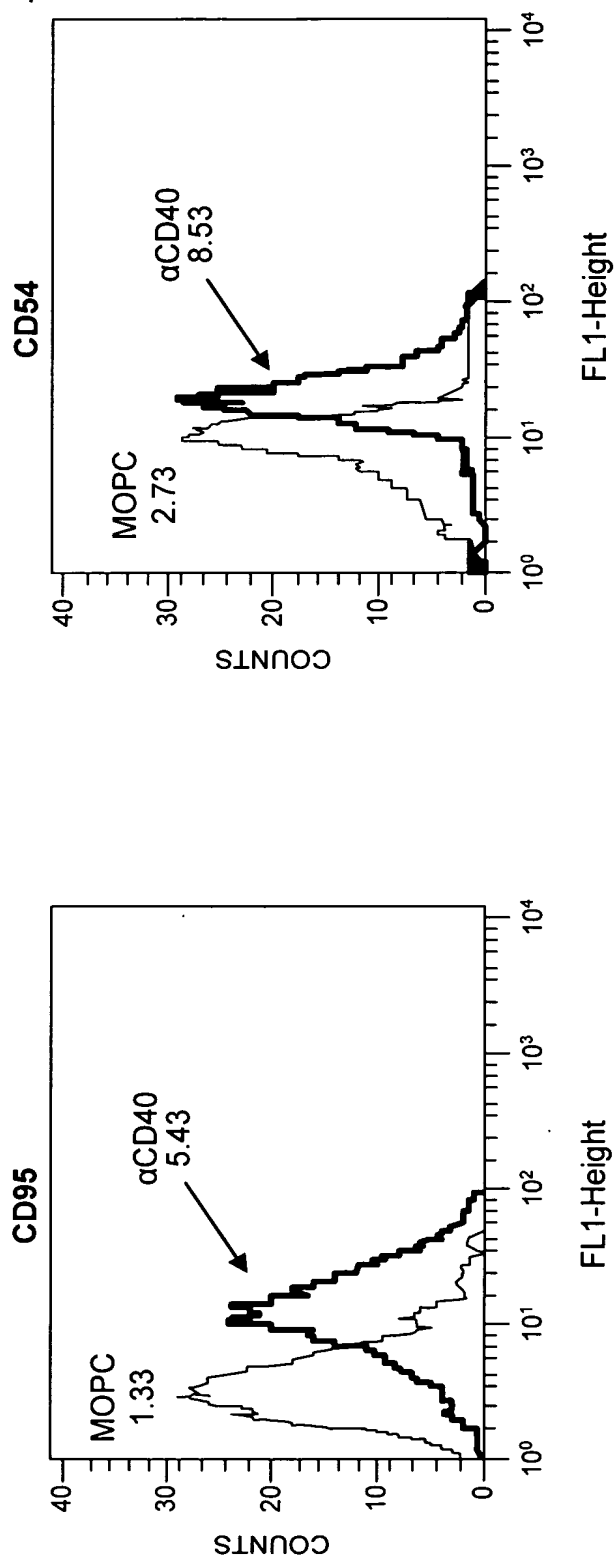


Figure 22a

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# B

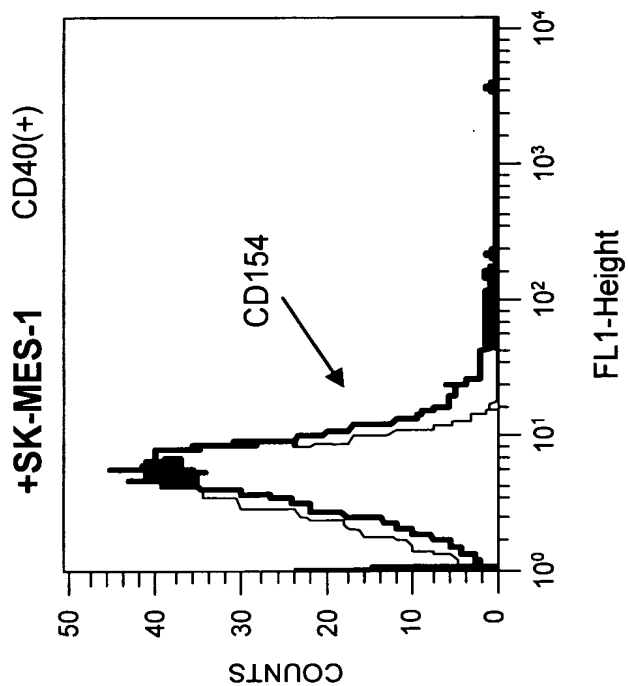
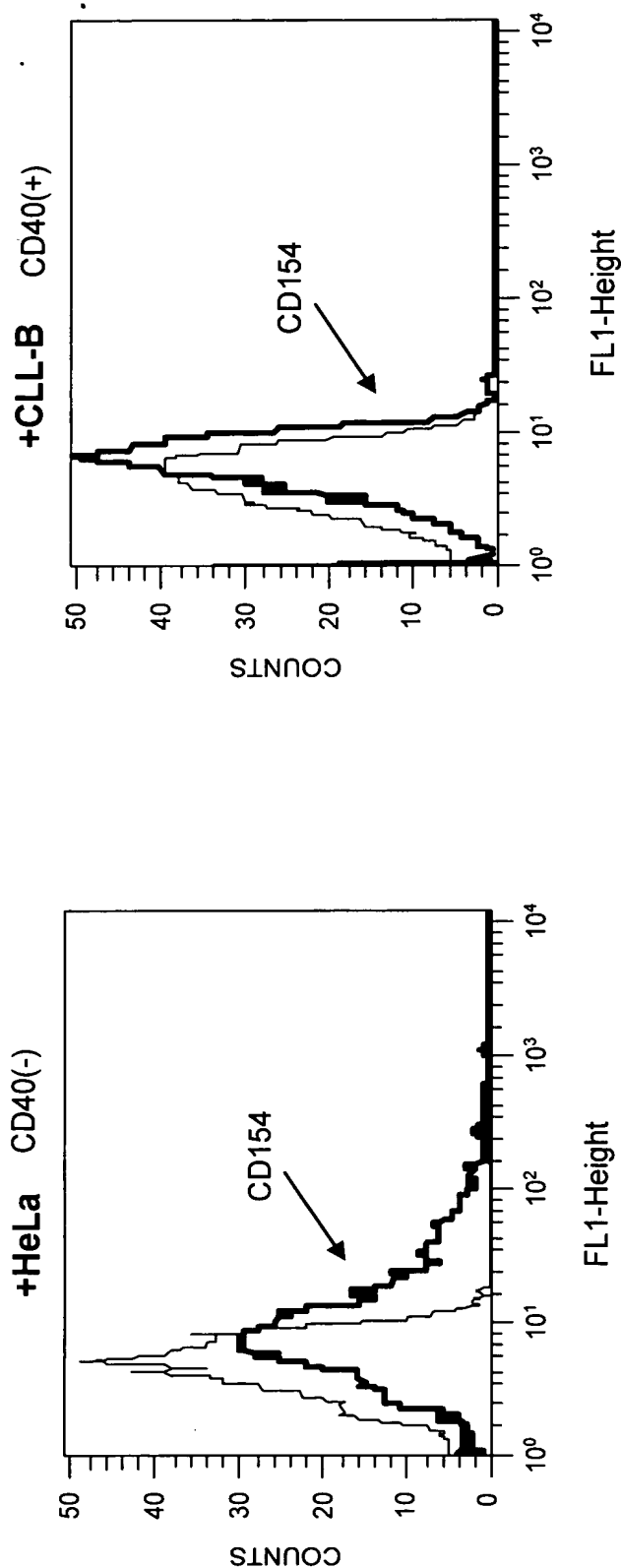


Figure 22b

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 10/10/03 10:00 AM





## RA SYNOVIAL FLUID AND PLASMA INHIBITION OF FAS-LIGAND

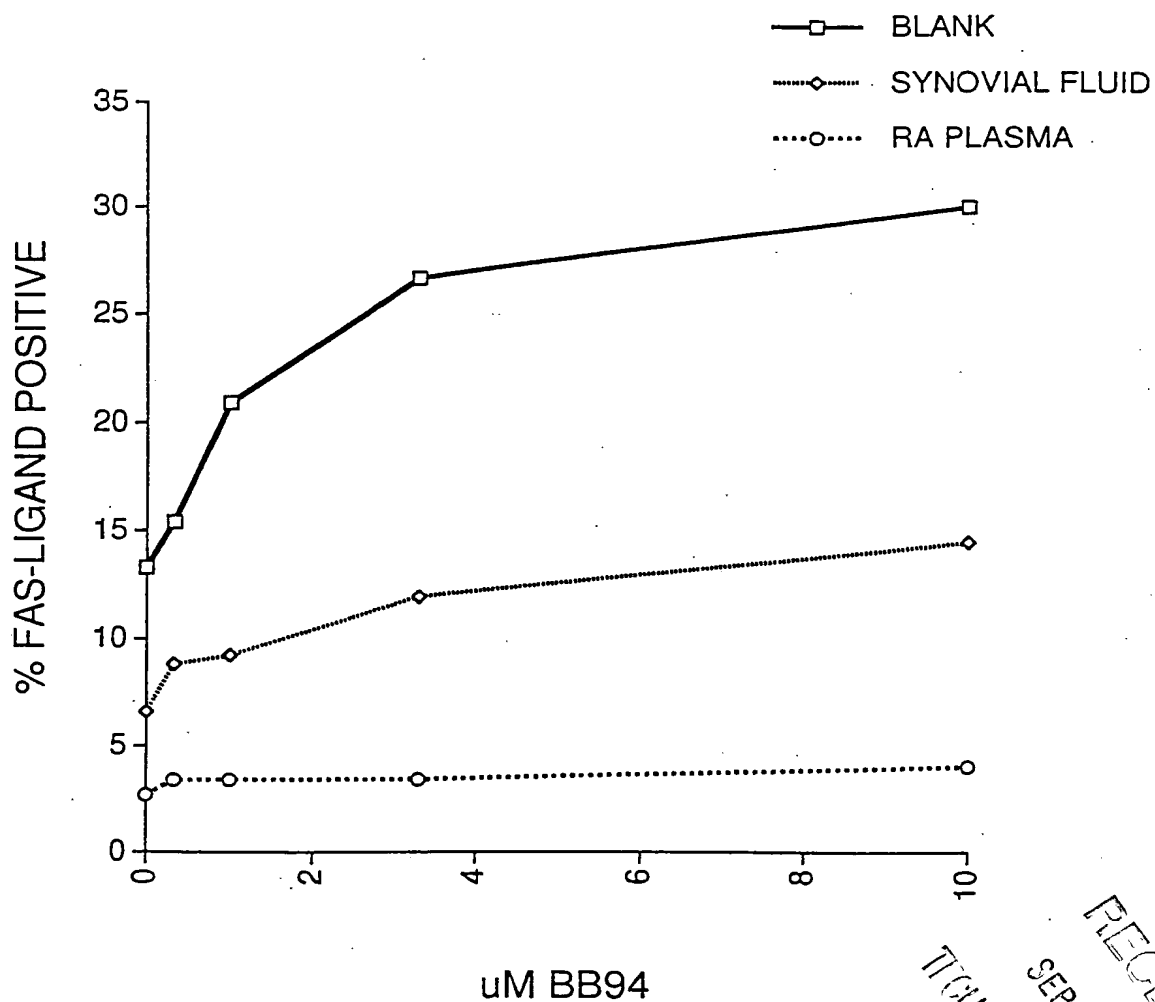


Figure 23

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## Gene Therapy of Leukemia

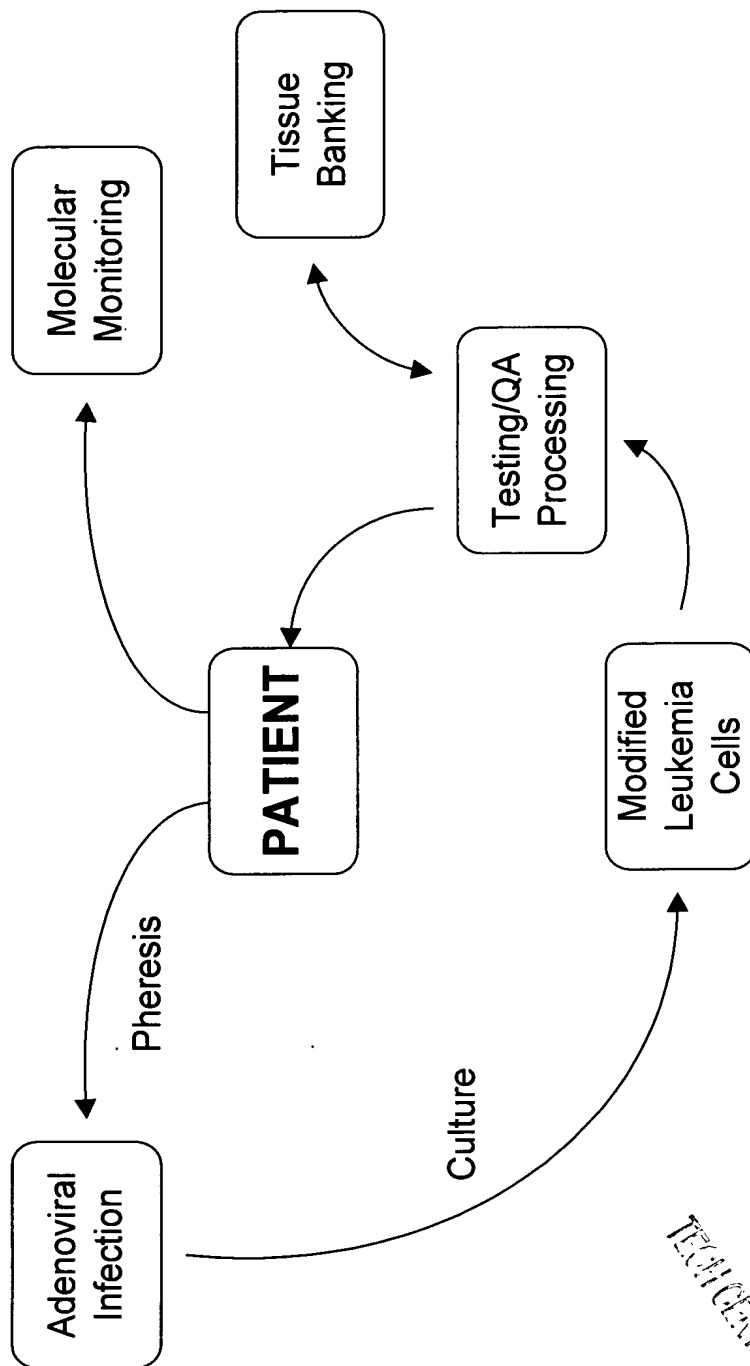


Figure 24

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## Matrix Metalloproteinase Cleavage Sites

**Cleavage**  $\uparrow$

$$P_4 \quad P_3 \quad P_2 \quad P_1 \quad P'_1 \quad P'_2 \quad P'_3 \quad P'_4$$

## Collagenases

### MMP-1 Interstitial Collagenase

P <sub>4</sub>	P <sub>3</sub>	P <sub>2</sub>	P <sub>1</sub>	P' <sub>1</sub>	P' <sub>2</sub>	P' <sub>3</sub>	P' <sub>4</sub>
Ala	Pro	Leu	Gly	Met	Arg	Met/Ala	Arg
Gly/Leu	Leu	Met/Tyr	His	Leu	Leu	Gly	Lys
Met	Ala	Val/Gly	Glu	Ile	Phe	Val	Gln
Glu	Asp	Ile	Tyr	Gln	Trp	Ser	Ile
Pro	Ser	Gln/Arg	Ala	Pro	Glu	Glu	Gly
Tyr	Glu	Asp	Phe	Phe	Ala	Phe	Ser
Ile	Gly	Glu	Gln	Ala	Val/Gly	Arg	Glu
Thr	Arg	Ala	Asn	Tyr/Val	Ser	Pro	Ala
Arg				[not K,E,W]	Asn		

### MMP-8 Neutrophil Collagenase

P <sub>4</sub>	P <sub>3</sub>	P <sub>2</sub>	P <sub>1</sub>	P' <sub>1</sub>	P' <sub>2</sub>	P' <sub>3</sub>	P' <sub>4</sub>
Ala	Pro	Leu	Glu	Tyr	Ala	Gly	Arg
Gly/Leu	Leu	Gln	Gly/His	Ile	Leu	Met	Gln
Met			Ala	Leu	Trp	Ala	
Glu				Val			
Pro				Phe			

Tyr/Ile/Thr/Arg (otherwise sam

Figure 28A



## Gelatinases

### MMP-2 Gelatinase A

P <sub>4</sub>	P <sub>3</sub>	P <sub>2</sub>	P <sub>1</sub>	P' <sub>1</sub>	P' <sub>2</sub>	P' <sub>3</sub>	P' <sub>4</sub>
Gly	Pro	Arg	Gly	Leu	Ala/Leu	Gly/Ala	Gln
Ile	Ala	Gln	Asn	Ile/Phe	Phe/Trp	Leu	Arg
Pro	Arg	Leu	Ala	Val/Met	Gly	Ser	His
Arg	Ala	Ala	His	Ala	Arg/Gln	Pro	Pro
Leu	Lys	Lys	Leu	Glu	His		
	Ile	Ile	Tyr	Gln/Asn	Val		
	His	His		Ser			

### MMP-9 Gelatinase B

P <sub>4</sub>	P <sub>3</sub>	P <sub>2</sub>	P <sub>1</sub>	P' <sub>1</sub>	P' <sub>2</sub>	P' <sub>3</sub>	P' <sub>4</sub>
	Pro	Arg	Gly	Leu	Glu	Ala	Thr
		Gln		Ile/Phe	Ala/Leu/Phe	Leu	
Gln/Arg		Leu		Val/Met	Trp/Gly	Ser	
				Ala		Gly	

## Stromelysins

### MMP-3 Stromelysin 1

P <sub>4</sub>	P <sub>3</sub>	P <sub>2</sub>	P <sub>1</sub>	P' <sub>1</sub>	P' <sub>2</sub>	P' <sub>3</sub>	P' <sub>4</sub>
Asp	Pro	Phe	Glu	Leu	Arg	Ala	Thr
Gly	Ala	Leu/Met	Ala	Phe	Leu/Phe	Arg/Met	
Gln/Arg							
Leu	Val	Tyr	Gln/Phe	Trp/Tyr	Trp	Gly	Pro
Ile	Leu	Pro/Gly/Glu	Asn	Ile	Val	Val/Ile	
Glu/Val							
Leu	Thr	Ile	His	Val	Gln	Ser/Asn	Ala
Lys	Phe	Ala	Gly	Met	His/Met	Glu/Thr	
Gly/Asp							
Arg	Arg	Ser	Leu/Pro	Glu	Glu/Ser/Thr	Leu	
Ser/Lys/Phe							
Pro/Met	Ser/Gly		Lys/Tyr/Arg				
Ala/Phe/Gln							

Figure 28B



**MMP-10 Stromelysin 2**

P <sub>4</sub>	P <sub>3</sub>	P <sub>2</sub>	P <sub>1</sub>	P' <sub>1</sub>	P' <sub>2</sub>	P' <sub>3</sub>	P' <sub>4</sub>
Arg	Ala	Ile	His	Ile	Gln	Ala	Glu
Gly	Pro	His	Leu	Leu	Val	Glu	Ala

**Others**

**MMP-7 Matrilysin**

P <sub>4</sub>	P <sub>3</sub>	P <sub>2</sub>	P <sub>1</sub>	P' <sub>1</sub>	P' <sub>2</sub>	P' <sub>3</sub>	P' <sub>4</sub>
Ile	Pro	Leu	Glu	Leu	Arg	Ala	Gln
Gly	Leu	Gln	Met/Ala	Ile	Met	Val/Arg/Met	
Pro		Val	Pro/Gln	Met	Gln	Gly	

Figure 28C

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